

PATENT ABSTRACTS OF JAPAN

(11)Publication number : 2002-098454

(43)Date of publication of application : 05.04.2002

(51)Int.Cl.

F25D 1/02
F28F 1/02
F28F 1/40
F28F 21/08
H01L 23/473
H05K 7/20

(21)Application number : 2001-027617

(71)Applicant : MITSUBISHI MATERIALS CORP

(22)Date of filing : 05.02.2001

(72)Inventor : NEGISHI TAKESHI
NAGASE TOSHIYUKI
NAGATOMO YOSHIYUKI
SHIMAMURA SHOICHI
TOKIWA ASAO

(30)Priority

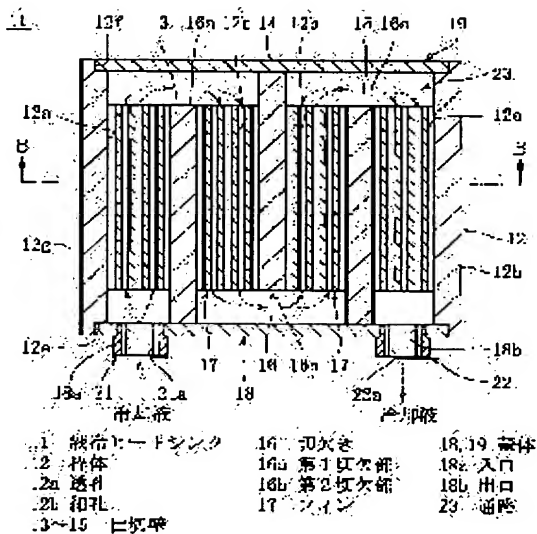
Priority number : 2000219971 Priority date : 21.07.2000 Priority country : JP

(54) LIQUID-COOLED HEAT SINK AND ITS MANUFACTURING METHOD

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain a liquid-cooled heat sink having a high thermal conductivity and good moldability and corrosion resistance using a wrought product of aluminum or aluminum alloy.

SOLUTION: The liquid-cooled heat sink 11 has an inner passage 23 through which cooling liquid can pass and is bonded to a ceramic board. A flat frame body 12 having opposite open ends is provided with a plurality of through holes 12a defined by a plurality of partition walls 13-15 to extend from one end toward the other end and cuts 16 are made at one end or both ends of the plurality of partition walls. Corrugate fins 17 are inserted into the plurality of through holes, respectively, and each through hole is sectioned by these fins into a plurality of thin holes 12b extending from one end toward the other end of the frame body. Opposite ends of the frame body are closed by a pair of covers 18 and 19 having an inlet 18a and an outlet 18b of cooling liquid. The passage is formed by conducting the cut and the thin hole and the inlet and outlet are located, respectively, at the opposite ends of the passage.



LEGAL STATUS

[Date of request for examination]

[Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the
examiner's decision of rejection or application converted

Best Available Copy